Patient & Family Guide

2019

Enhancing Your Recovery After Cardiac Surgery

Steps You Can Take to Get Better Sooner

My name is:

Surgery name:	
My surgeon:	
Admission date:	
Surgery date:	
Discharge date:	



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Enhancing Your Recovery After Cardiac Surgery

We want you to get better as soon as possible after your heart surgery.

The best way to do this is by:

- > being as fit as possible before your surgery
- > lowering the stress of surgery on your body
- y getting up and moving soon after your surgery

We call this ERAS: Enhanced Recovery After Surgery

- One of the most important parts of ERAS is that there are lots of things you can
 do to speed up your recovery. This guide explains how to do these. There is
 space for you to keep track of your progress and we encourage you to do this.
 To view all of the videos created by the ERAS Team, visit:
 - www.youtube.com/channel/UCWiXucS6KG_qi6MeJAclRGQ
- To find out more about cardiac surgery at Nova Scotia Health Authority (NSHA),
 visit:
 - > www.nshealth.ca/content/cardiac-surgery
- This guide will help you get ready for your surgery, and help to make sure you are in the best health you can be before surgery. It will also give you an idea of what to expect before, during, and after your surgery.
- If you have any questions aboutyour surgery, please contact the Cardiac Support Team.
 - > Phone: 902-473-6269 (Monday–Friday, 9 a.m.–5 p.m.)
 - If you reach our answering machine, leave a message with your name and phone number and we will call you back as soon as possible.

How can I help my recovery?

Eating well

- Good nutrition is always important, but it is even more important before and after surgery. A healthy, well-balanced diet will give your body all of the nutrients it needs to fight infection and heal. To learn more about the importance of healthy eating before and after surgery, watch this short video created by the ERAS Team:
 - > www.youtube.com/watch?v=mzVmoL3BlhI&t=36s
- People who are underweight, malnourished, or obese have more complications after surgery. People who are at a healthy weight and well-nourished heal and recover more quickly.
- We will assess your nutritional status before surgery. If you are malnourished
 or at risk of malnutrition (meaning that you are eating and drinking too little or
 have lost weight other than fluid without trying), you will be given information
 to help you improve your nutrition before surgery. You may also be prescribed
 supplement drinks and referred to a dietitian.

For most people a healthy balanced diet includes a variety of foods from each food group.

- Vegetables and fruit are low in calories and high in vitamins, minerals, and fibre. Try to eat at least 5 servings per day. One serving is half a cup. Choose a variety of fresh, frozen, canned (without salt), or dried vegetables and fruit. Choose whole vegetables or fruit instead of juice.
- Grains are an important source of minerals, vitamins, fibre, and energy. These
 include rice, bread, pasta, and potatoes. See Canada's Food Guide for the
 recommended number and size of servings. Choose whole grains whenever
 possible.
- Protein-rich foods include lean meats, poultry, fish, eggs, nuts and seeds, and pulses. Include at least one serving of high-protein food at each meal. The amount of protein you need to heal is almost twice as much as you need to stay healthy before your surgery.
- Milk products are a good source of protein, energy, minerals, and vitamins, especially calcium and vitamin D. Choose lower-fat versions if you need to lose weight or lower your cholesterol. Keep an eye on the amount of fat, sugar, and salt in some dairy products, such as cheese and yogurt.

- If you are overweight, try to lose weight before your surgery. This will lower the risk of complications, such as poor wound healing, infections, and trouble breathing. Try to lose weight slowly to make sure you lose fat and not muscle. Continue to eat a healthy, balanced diet that includes a variety of foods from each food group and eat regular meals. You can cut down on foods that are high in fat and sugar, reduce your portion sizes, and drink water instead of juice or pop. If you need to snack between meals, choose fresh vegetables or fruit, low-calorie yogurt, or low-fat cottage cheese.
- Starting good eating habits before your surgery will make it easier to eat well after your surgery and help you heal faster!
- For more information on keeping a healthy weight, visit:
 - > www.nhlbi.nih.gov/health/educational/lose_wt/BMI/bmicalc.htm

Staying active

- While waiting for your surgery, it is important to stay physically active. The stronger and fitter you are before surgery, the faster you are likely to go home afterwards.
- Staying physically active means continuing to do your usual activities, as you
 are able. If your symptoms include chest pain or tightness, or shortness of
 breath, it is important to talk about your activity level with the doctor or nurse
 you see in the clinic.
- Walking is a good way to stay active, whether you can walk a few steps or a few miles. While walking, be sure to:
 - Dress in loose-fitting clothes and wear comfortable shoes.
 - Walk at a pace that lets you breathe comfortably. You should be able to walk and talk at the same time. If you get out of breath or feel any chest pain, STOP and rest. If you have nitroglycerin spray, always carry it with you.
- Start with a time or distance that you can do comfortably, and gradually increase it if you can.
- Avoid extreme weather conditions (e.g., wind, rain, too cold, too hot), as they may make you feel more tired or out of breath.
- Make sure that you stay hydrated by drinking plenty of fluids.

Doing your exercises

- This guide includes exercises to improve your flexibility and strength before
 your surgery. They have been designed specifically for people who are frail
 and have shortness of breath. Doing them regularly will make your muscles
 stronger, improve your circulation, help with shortness of breath, and help you
 get ready for surgery.
- Try to find a comfortable position and relax the muscles not involved in the exercise.
- Avoid holding your breath while exercising.
- Give yourself time to get your breath back after each exercise. Rushing to finish
 the exercise can make you feel more out of breath. Your breathing should
 sound quiet. Breathe in and out at a comfortable pace until your breathing
 feels settled.
- You do not have to do all of the exercises at one time. It may be better to do several short sessions of exercise each day, rather than one long session.
- If you feel unwell, you may need to stop exercising or reduce how much you are doing. Gradually build back up as you start to feel better.
- Try to find a regular pattern for exercise that fits into your daily routine. Wait for one hour after eating before exercising.
- You may find that some of the exercises become too easy; ask the ERAS Team for progression exercises.

What are your questions?

Please ask. We are here to help you.

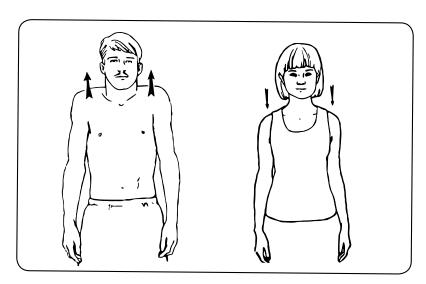
Flexibility exercises

You may start these stretches as soon as you return home. It is important that you do not hold your breath as you do the stretches – keep breathing normally. Sit on a firm chair with a straight back and no arms.

Repeat each stretch 5 times in each direction.

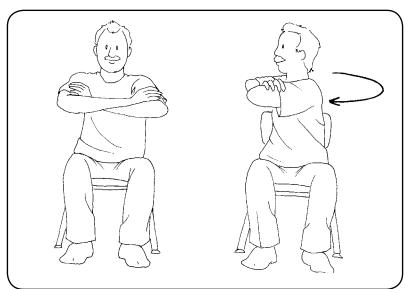
1. Shoulder shrug

Start with your shoulders relaxed. Slowly lift your shoulders up towards your ears. Return to the starting position.



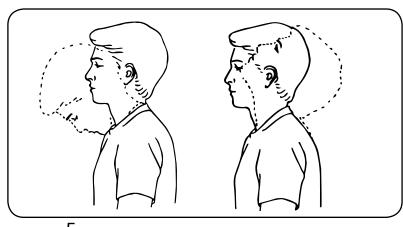
2. Twist

Fold your arms in front of you. Twist from the waist to the right and return to the centre. Now twist to the left. Repeat 5 times for each side.



3. Neck stretch

Bring your chin down towards your chest as far as you can. Slowly bring your chin back up while breathing in. Bring your head towards your back as far as you can. Slowly bring your head back up.



Strengthening leg exercises

Warm up: ankle pumping

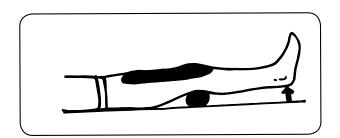
Lift one leg so your foot is slightly off the floor. Move your foot up and down in a pumping motion. Then circle your ankle in each direction. Put that foot back down on the floor. Repeat with the other foot.



Lay on a bed.

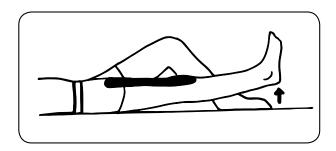
4. Thigh stretch

Wrap a large can in a towel. Put it under your knee. Lift your foot off the bed by straightening your leg. Do not lift your knee off the can. Hold for 5 seconds. Relax and repeat 10 times. Repeat with the other leg.



5. Straight leg raise

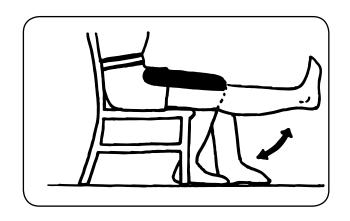
Bend one leg and put your foot flat on the bed. Lift your other leg about 6 inches while keeping it as straight as possible. Hold for 5 seconds. Relax and repeat 10 times. Repeat with the other leg.



Sit on a firm chair with a straight back and no arms.

6. Seated leg raise

Straighten one leg as far as possible.Hold for 5 seconds. Then bring your heel as far back under the chair as possible.Hold for 5 seconds. Relax and repeat 10 times. Repeat with the other leg.



Calf exercises

7. Sit to stand

Move to the front of your chair. Lean forward, look up, and then stand without using your hands. Stand for______ seconds. Then sit down.

Repeat _____ times.

Stand at a counter.

8. Squats

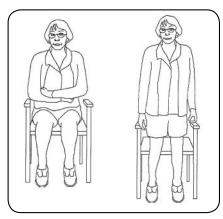
Hold on to the counter for balance. Stand up tall and keep proper posture. Place your feet shoulder-width apart. Bend your knees slightly, about ¼ of a squat. Do not do a full squat. Stand for 30 seconds, then repeat 3 times.

9. Step ups

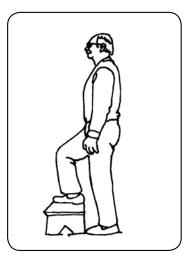
Stand with a step in front of you. Hold on to something for balance like a railing at the foot of a staircase. Lift your foot up, put it on the step, and hold for ______ seconds. Keep your body straight. Lift your foot off the step and put it back on the ground. Repeat with your other foot. Repeat _____ times with both feet. Gradually try to lower the amount of hand support while stepping.

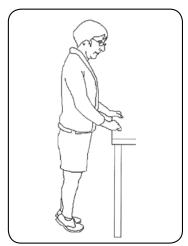
10. Heel raises

Stand on your toes. Hold for _____ seconds, then lower yourself down. Repeat ____ times.









Practicing post-surgery restrictions

- After heart surgery, most patients have a wound down the centre of their chest over the breast bone. An important part of wound and bone healing is being careful about the activities you do with your arms after surgery. This is because certain activities put a lot of stress on the bone while it is trying to heal.
- The main restriction is NO lifting, pushing, or pulling with your arms for the first 3 months after surgery. Do not lift any objects heavier than 5 pounds (2.2 kilograms). This will affect your ability to get in and out of bed, stand up and sit down in a chair, carry shopping bags, and do other everyday activities.

Getting in and out of bed

- > Practice getting in and out of bed before surgery.
- > Always hold a pillow in front of your chest to protect your wound.
- Roll onto your side and gently lower your legs off the edge of the bed. Do not use your arms to push. Then push down through your elbow to come to a sitting position on the edge of the bed.
- > To lie down in bed, follow the same process in reverse.

Getting in and out of a chair

- > Sit on the edge of the chair with your arms crossed in front of your chest.
- Plant both feet firmly on the floor, then rock gently backwards and forwards
 3 times so that your nose comes forward over your toes.
- On the third rock forward, push up strongly through your legs and come to a standing position.
- To learn more about exercise before and after surgery, and practicing post-surgery restrictions, watch this short video created by the ERAS Team:



> www.youtube.com/watch?v=iTWP1IOFeYc&t

Getting ready for the day of surgery

- Think about how you will get to the hospital. This might involve getting up early, so try to get a good rest the day before.
- Think about what you will bring with you to the hospital. Make sure you have a pair of well-fitting, flat, comfortable slippers or shoes. If you usually use a walking aid or have glasses, dentures, or hearing aids, make sure to bring these with you.
- Think about how you will get home from the hospital. You will be given the date that we expect you to be discharged. Make sure your family and friends know when this will be.
- Check that you have supports in place for when you get home, as you might need extra help.
- Before going into the hospital, stock up your freezer so you don't have to worry about grocery shopping right after you are discharged.
- If you are having trouble managing at home before your surgery, or you cannot get up out of a chair easily without using your arms, tell the nurse at the Pre-Admission Clinic.
- If you are the primary caregiver for someone else, think about who will look after this person while you recover from surgery.

Steps to help your recovery while in hospital

Nutrition

- Eating and drinking well gives your body the fuel it needs to heal.
- After surgery your appetite may be less, but it is important that you try to eat and drink, as this will help to encourage your appetite.
- If your appetite and food intake are still poor when you go home, try to eat 6 small meals or snacks each day.
- If your appetite does not go back to normal within a few weeks and you are losing weight without trying, call your family health care provider.

Exercise

The physiotherapist or nurse will give you exercises to help your body get strong and fit again. After your surgery you will be encouraged to be active as soon as possible.

Here is an example of what to expect after your surgery:

Day 1

- The physiotherapist or nurse will assess your breathing, and check that you can take a deep breath and cough comfortably.
- We will teach you how to support your wound while coughing strongly.
- The goal is for you to get out of bed and sit in a chair in the morning and again in the afternoon.
- We will explain how to protect your wound and how to move without putting pressure through your arms.
- Staff will teach you some simple exercises to help keep up your strength. You may also do some walking in place.

Day 2

- The physiotherapy/nursing team will assess your walking.
- They may still be monitoring your breathing, especially if you are coughing up phlegm or are not able to take a deep breath.
- We will tell you if it is safe for you to be walking on your own and how much walking you should be doing.
- The goal is for you to be as independent as possible, as soon as possible.
- We will go over the information you were given about your wound and exercises.

Day 3

- You should be able to walk around the unit for short distances on your own. We will encourage you to do this often throughout the day. The more you can walk and move around, the quicker you will be able to go home.
- You will be encouraged to do things for yourself, such as washing and dressing.

Days 4 and 5

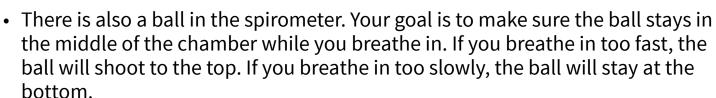
- The physiotherapy/nursing team will help you with your walking. You will need
 to be able to walk a certain distance before you are ready to go home. The goal
 is to be able to walk 200 metres. Don't worry if you can't do this right away, as
 everyone is different.
- You will also be assessed on stairs (if needed) for a safe discharge home.
- We will teach you flexibility exercises similar to those you did before your surgery, and given more info about your recovery and cardiac rehabilitation.

Using an incentive spirometer

- Many people feel weak and sore after surgery, and taking big breaths can be uncomfortable. An incentive spirometer is a device used to help you take deep breaths correctly. It teaches you how to take slow deep breaths. Deep breathing helps to keep your lungs healthy while you heal, and helps to prevent lung problems like pneumonia.
- By using the incentive spirometer every 1-2 hours, or as told by your nurse or doctor, you can take an active role in your recovery and keep your lungs healthy.

To use an incentive spirometer:

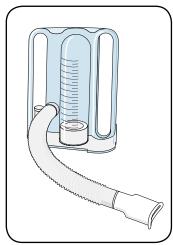
- 1. Sit up and hold the device.
- 2. Put the mouthpiece in your mouth. Make a good seal over the mouthpiece with your lips.
- 3. Breathe out (exhale) normally.
- 4. Breathe in (inhale) slowly.
- 5. A piece in the incentive spirometer will rise as you breathe in. Try to get this piece to rise as high as you can.



- Hold your breath for 3-5 seconds. Then slowly exhale. Take 10-15 breaths with your spirometer every 1-2 hours, or as often as told by your nurse or doctor.
- To learn the proper technique for using an incentive spirometer, watch this short video created by the ERAS Team:
 - > www.youtube.com/watch?v=d_mr8XSd1Vg

Helpful tips:

- If you are not able to reach the number marked for you, don't worry. You will get better with practice and as your body heals.
- If you start to feel dizzy or lightheaded, remove the mouthpiece from your mouth and take some normal breaths. Then continue using the incentive spirometer.
- If you feel ill, stop and talk to a health care team member.



Deep breathing:

- Take a deep breath in through your nose.
- Hold your breath for 2-3 seconds, by counting 1, 2, 3 in your head.
- Blow the air out through your mouth.

Repeat this deep breathing in and out 2-3 times.

Coughing

- Hold your pillow in front of your chest. This will help make coughing more comfortable and prevent strain on your chest.
- Take a deep breath in through your nose.
- Cough 2 or 3 times in a row as you breathe out.
- To learn more about practicing deep breathing and coughing exercises, watch this short video created by the ERAS Team:
 - > www.youtube.com/watch?v=iTWP1IOFeYc&t

My Diary

Day 1 afte	er surgery	(date).
How am I	feeling?	
How well	-controlled is my pain? Well-controlled	
	I'm still sore and would like so	ome more painkillers
What are	my goals?	
	t eating and drinking. Try to eat t 6 cups of fluid	t something at each meal and drink at
	out of bed with help from staff fo	·
→ Try t	to get out of bed and onto my fe	eet
How man	y cups of fluid did I drink?	
	2 3	□ 5 □ 6 □ 7 □ 8
What hav	e I eaten?	
	Breakfast	
	Snack	
	Lunch	
	Snack	
	Dinner	
Some nau	usea (feeling sick to your stoma	
	I haven't eaten because:	

How activ	e have I been?
	Sat out of bed with help for hours
	Incentive spirometer (how many times per hour?)
	Walked in place with help
	Practiced supported coughing and exercises times
	I haven't practiced supported coughing or exercised because:
What has	gone well today in my recovery?
What has	gone well today in my recovery?
What has	gone well today in my recovery?
What has	gone well today in my recovery?
What has	gone well today in my recovery?
What has	gone well today in my recovery?

Day 2 afte	er surgery	(date).	
How am I	I feeling?		
How well∙	l-controlled is my pain? Well-controlled		
	I'm still sore and would like sor	me more լ	painkillers
Eat 3ContandGet 6	e my goals? 3 meals and drink at least 6 cups Itinue to follow physiotherapist's I coughing Out of bed (without using arms) Out of bed for up to 6 hours	s guidance	
	2 3		6 7
	Breakfast		
	Snack		
	Lunch		
	Snack		
	I haven't eaten because:		

How activ	ve have I been?
	Sat out of bed with help for hours
	Incentive spirometer (how many times per hour?)
	Walked around my bed
	Walkedsteps
	Practiced supported coughing and exercises times
	I haven't practiced supported coughing or exercised because:
What has	gone well today in my recovery?

Day 3 afte	er surgery (date).
How am I	I feeling?
How well	I-controlled is my pain? Well-controlled I'm still sore and would like some more painkillers
Eat :InceWall	my goals? 3 meals and drink at least 6 cups of fluid entive spirometer (how many times per hour?) k to the bathroom with help ck that I have clothes to wear home tomorrow
	1
What hav	ve I eaten?
	Breakfast
	Snack
	Lunch
	Snack
	Dinner
How activ	ve have I been? Walked steps or distance
	□ 1 time
	□ 2 times
	□ 3 times
	☐ 4 times
	Did my exercises times today

What has gone well today in my recovery?				
Are there any changes to my support arrangements at home after discharge? □ Yes (If yes, please tell your nurse)				
□ No				

Day 4 after sur	rgery (d	ate).
How am I feeli	ing?	
□ Wel	trolled is my pain? ll-controlled still sore and would like some	e more painkillers
Get dressIncentiveMove my	he bathroom without help	
How many cup 1 2 3 4	ps of fluid did I drink?	□ 5 □ 6 □ 7 □ 8
What have I ea	aten?	
☐ Brea	akfast	
□ Sna	nck	
☐ Lun	nch	
☐ Sna	ack	
☐ Dini	ner	
How active ha	ive I been?	
What has gone	e well today in my recovery?	

Are there	e any changes to my support arrange	men	its at home after discharge?
	Yes (If yes, please tell your nurse)		
	No		
Final pos	st-operative period		
How am	I feeling?		
How wel	l-controlled is my pain? Well-controlled		
	I'm still sore and would like some m	ore	painkillers
What are	e my goals?		
	lk up and down 1 flight of stairs		
	lk around the ward on my own with co	onfid	ence
› Und	derstand my medications for going ho taking them, and when/how much to	me,	including what they are, why
› Get	ready to go home		
How ma	ny cups of fluid did I drink?		
	1		5
	2		6
	3 4		<i>1</i> 8
ب المعالمة المعالمة	ve I eaten?		O .
wiiat iia			
	Di calliast		
Ц	Snack		
	Lunch		
	Snack		
	Dinnor		

Going home

Contacts

Don't worry if you are not well enough to go home on your planned day of discharge. Each person is different and some people take longer than others to get better. Don't be surprised if you feel down. This is normal after surgery and your mood will get better over time. It is OK to ask for help.

We are here to support you as you recover. Your health care team will answer any questions that you or your family have.

How can I improve my recovery after I leave the hospital?

- Continue to eat and drink well and exercise regularly.
- Take part in your local cardiac rehabilitation.

Monday to Friday, 9 a.m.-6 p.m.

Contact us if you have any questions or concerns.

Contacts			
Cardiac Rehabilitation			
Cardiac Support Nurses	;		

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What are your questions?
Please ask. We are here to help you.

Questions for my health care team:					



Feedback Form

Thank you for your help piloting this guide, *Enhancing Your Recovery After Cardiac Surgery*. Please answer the following questions to help us make this guide even better! Give your completed form to a unit staff member for collection.

1. Was this guide e	easy to read?				
☐ Yes	□ No				
2. Did the informa	2. Did the information in this guide flow in a way that made sense to you?				
☐ Yes	□No				
3. Were the image	s helpful?				
☐ Yes	□ No				
4. Would more/other images be helpful?					
☐ Yes	□ No				
What images should be added/changed?					
5. What did you learn from this guide?					

6. Was there any un	necessary information in this guide?			
□ Yes	□ No			
. How would you change this guide?				
8. Do you have any	questions that were not answered in this guide?			
9. Did you find it he∣ □ Yes	lpful to keep a diary of your activity and progress? □ No			
□ Sometimes (please explain)				



10. Do you feel that you have taken an active part in your care?					
☐ Yes	□ No				
If yes, ple	If yes, please explain:				
l ————————————————————————————————————					
l ————————————————————————————————————					
l					
I					
11. In you	r opinion, was this guide:				
	Too long				
	Too short				
ı 🗆	Just the right length				
12. How do you think you will use this guide?					
☐ Read it once and throw it away					
	☐ Take it home to read later				
	Will not read it				
i 13. Please	e rate this guide overall.				
	Very good				
	Good				
<u> </u>	Fair				
	Poor				
Thank you for your help!					

Notes:			

Looking for more health information?

Find this pamphlet and all our patient resources here: http://library.nshealth.ca/PatientGuides
Contact your local public library for books, videos, magazines, and other resources.
For more information, go to http://library.novascotia.ca
Connect with a registered nurse in Nova Scotia any time: call 811 or visit https://811.novascotia.ca
Learn about other programs and services in your community: call 211 or visit http://ns.211.ca

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www.nshealth.ca

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